

**County of Loudoun**  
**Department of Planning**  
**MEMORANDUM**

**DATE:** April 18, 2007

**TO:** Loudoun County Planning Commission

**FROM:** Rodion Iwanczuk, Senior Planner *RI*  
Department of Planning

**SUBJECT:** April 23, 2007 Planning Commission Worksession:  
SPEX 2006-0022 - Western High School at Fields Farm

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The Planning Commission discussed the Western High School at Fields Farm Special Exception (SPEX) application on April 9, 2007 and voted 6-0-3 (Hsu, Munsey, Whitmore absent) to forward the application to committee for additional discussion. Information was presented by County and Loudoun County Public Schools (LCPS) staff and responses were provided to additional questions posed by Commissioners. Questions and discussion focused on transportation and utilities issues. The application is scheduled for a Board of Supervisors Public Hearing on May 8, 2007.

**Transportation**

The Planning Commission discussed recommended transportation improvements with staff and the applicant. Staff presented information about funding and projects associated with the proposed high school that is included in the County's Capital Improvements Program (CIP). The CIP includes \$5.9 million to pave Alder School Road between Routes 690 and 719 north of Round Hill, and provides approximately \$3.3 million in supplemental funding to complete roadway and intersection projects identified as being school-related in the Western High School traffic study.

Planning Commission discussion focused upon proposed impacts and improvements to Alder School Road, and how student drivers could be prevented from using Alder School Road between Routes 287 and 611, especially in case of roadway flooding on portions of the road. It was also noted that student drivers from Eastern Loudoun County high schools unfamiliar with

rural roads would attend events such as athletic contests at the proposed high school. Commissioners discussed the possibility that phased improvements could take place up to one year following issuance of a Certificate of Occupancy for the school and expressed concern with proposed Condition of Approval No. 3, under which a regional road contribution would be used for other unspecified roadway improvements near Purcellville in case a proposed Hillsboro roundabout (Routes 9/690) is not built.

**Improvements.** The proposed roadway improvements to occur prior to issuance of a Certificate of Occupancy are:

- Alder School Road and school entrance – Westbound left turn lane
- Alder School Road and Route 611 – Eastbound right turn lane
- Alder School Road and Route 690 – Roundabout
- Route 690 and Route 9 – Contribute fair share of \$97,500 for roundabout or other intersection improvement
- Regional road contribution (\$136,407) – anticipated for use with Route 690/Route 9 roundabout

If the Route 690/Route 9 roundabout is not constructed, the fair share amount (\$97,500) will be used for other improvements at the Route 690/Route 9 intersection, taking into account the offset driveway for Hillsboro Elementary School. The regional road contribution (\$136,407) could be made available for a variety of improvements including the Business Route 7/Route 287 intersection, Alder School Road, or other areas important to the Town of Purcellville.

As currently proposed in the Conditions of Approval, within one year of Certificate of Occupancy:

- Hirst Drive and Hatcher Avenue – Southbound left turn lane and westbound right turn lane
- Hirst Drive and Maple Avenue – Eastbound right turn lane, westbound left turn lane, and northbound right turn lane

The above improvements are ones that the school district proposes to construct to mitigate the school's impacts.

Other roadway and intersection improvements are warranted by background traffic but do not surpass a specified threshold of school-related traffic to recommend school district improvements.

These additional improvements are:

- Installation of a traffic signal at Harmony Intermediate School and Business Route 7
- Turn lanes at Hirst Drive and Route 690

- Installation of a traffic signal and an eastbound left turn lane at Business Route 7 and Route 287
- A westbound turn lane at Business Route 7 and 32 Street
- Turn lanes at Business Route 7 and Hatcher Avenue
- Installation of a traffic signal and turn lanes at Business Route 7 and 21 Street/20 Street/Route 690
- Turn lanes and traffic signal upgrade at Route 287 and Hirst Drive

As noted in the Planning Commission Memorandum for the April 9 worksession, the Virginia Department of Transportation (VDOT) has estimated that the total cost for completing a two-lane roundabout would be \$6.1 million, although the County and the Town of Hillsboro have expressed interest for a one-lane roundabout. Proposed Condition No. 3, as originally proposed, contained flexibility to shift a regional road contribution of \$136,407 from the Hillsboro roundabout to another unspecified roadway improvement near Purcellville. Commissioners instead have requested a specific project(s) that the contribution could be used for if the Hillsboro roundabout is not constructed. Staff suggests that an alternate project could be a proposed roundabout at the intersection of Business Route 7 and Route 287 at Purcellville's eastern gateway. In any case, Condition No. 3 has been modified to remove the sentence about where to shift the regional road contribution and related Condition No. 12 has been deleted (see Attachment No. 2).

Paving of an unpaved portion of Alder School Road (Route 711) between Routes 690 and 719 may begin during 2008-09. The Board of Supervisors has included \$5.9 million for Alder School Road paving during Fiscal Year 2009 in the 2009-12 CIP. No plans exist nor is any construction scheduled for paving Alder School Road between Routes 287 and 611, which the LCPS has estimated to cost \$8.72 million. The Planning Commission expressed concern for students using Alder School Road when heavy rainfall has created flooding conditions across the roadway. In such situations, to restrict traffic on the roadway between Routes 287 and 611, close coordination between Loudoun County, the Sheriff's Office, LCPS, and VDOT's Leesburg Maintenance Office offers the potential to prevent student drivers from gaining access to the roadway. The Planning Commission also requested traffic count information for Alder School Road. Data is lacking for the segment between Routes 287 and 611, however, for the segment between Route 611 and 690, a 2005 VDOT traffic survey reported 790 average daily vehicle trips.

Additional information requested by the Planning Commission is included in material submitted by the LCPS in Attachment No. 6.

**Phasing.** The County Attorney's Office had earlier noted that allowing two phased improvements following issuance of a Certificate of Occupancy could establish a precedent that other development applications may seek to emulate (i.e. committing to improvements after the project is completed). LCPS staff explained that these projects would be phased to coincide with additional improvements expected in the area. Also, by phasing there would be less construction and consequently less disruption to the general traffic flow in the area.

As an alternative, the Planning Commission may wish to consider limiting enrollment in some way until the phased improvements are completed. For example, attendance could be limited to grades 9-11 until the phased roadway projects were completed.

### **Utilities**

Planning Commissioners asked additional questions about the wastewater treatment and disposal system intended for the proposed high school and about the "Pump and Haul" system approved for the Upper Loudoun Youth Football League (ULYFL) facilities.

The pump and haul option for ULYFL use was first discussed at a September 2005 meeting attended by County officials and staff, Town of Purcellville officials, and ULYFL representatives. At the time, an "out-of-phase" request for annexation of the Fields Farm property was under consideration. Upon annexation, the site would be eligible for extension of Town utilities. Noting that the annexation could take place by 2009, it was suggested at the meeting that temporary pump and haul service would be more cost-effective than installation of a septic tank and drainfield if Town utilities were to be extended to the site upon annexation. The Board of Supervisors subsequently approved the pump and haul authorization on October 4, 2005, which was for a permanent pump and haul service consistent with the State Code. Virginia law limits temporary pump and haul to special circumstances and under one year's duration (see Attachment No. 3).

Attachment No. 4 depicts the Fields Farm approved drainfield area that shows drainfields for Mountain View Elementary School, HS-3, and the ULFYFL facilities. An area of 1.5 acres is reserved for a drainfield for ULYFL, which would be sufficient for a treatment system that removes nitrogen from the effluent. The ULYFL Approved Plat, with revisions through May 23, 2005, is included as Attachment No. 7 and shows the approved drainfield area for Mountain View

Elementary School and ULYFL. Staff notes that sufficient drainfield area has been identified for each of the property's uses.

Staff was also requested to research information concerning SPEX 2004-0014, Red Cedar Wastewater Disposal Areas. That information is included as Attachment No. 5. SPEX 2004-0014 was approved by the Board of Supervisors on December 21, 2004.

### **RECOMMENDATION**

Staff recommends that the Planning Commission forward this item to the Board of Supervisors for a Public Hearing with a recommendation of approval, with the findings and conditions of approval as revised in the April 18, 2007 Staff Memorandum, and limiting attendance to grades 9-11 until phased transportation improvements listed in Condition No. 3 are completed.

### **SUGGESTED MOTIONS**

1. I move that the Planning Commission forward Western High School at Fields Farm, SPEX 2006-0022 to the Board of Supervisors with a recommendation of approval, with the findings and conditions of approval as revised in the April 18, 2007 Staff Memorandum, and limiting attendance to grades 9-11 until phased transportation improvements listed in Condition No. 3 are completed.

OR,

2. I move an alternate motion.

### **ATTACHMENTS**

1. Findings contained in March 19, 2007 Staff Report
2. Conditions of Approval as revised in April 18, 2007 Staff Memorandum
3. Board of Supervisors Motion to Approve Pump and Haul to Serve ULYFL Stadium, with Excerpts of Board Minutes, October 4, 2005
4. Drainfield Site Plan, Mountain View Elementary School, HS-3, and ULYFL
5. Red Cedar Wastewater Disposal Areas, SPEX 2004-0014
6. Memorandum, Loudoun County Public Schools, April 2, 2007, Additional Information in Response to the Commission's and Public Comment Questions for the Committee of the Whole April 23, 2007 Worksession

7. Approved Plat, Upper Loudoun Youth Football League Recreational Facilities, SPEX 2004-0009

NOTE: Attachments are not available electronically, but may be viewed at the Planning Department front counter or in the Building and Development file room.

**Western High School at Fields Farm, SPEX 2006-0022**

**Planning Commission Worksession, April 9, 2007**

**FINDINGS**

1. The proposal conforms to the policy guidance recommended in the Revised General Plan and the Purcellville Urban Growth Area Management Plan. The proposed high school is consistent with PUGAMP policies and specifically with the general schools locations depicted in Figure 10 on page 48 in the PUGAMP. Further, in accordance with the determination made on June 22, 2006 by the Loudoun County Zoning Administrator, a Commission Permit is not needed.
2. The application conforms to the Revised 1993 Zoning Ordinance.
3. The high school building and accessory structures and facilities are located within the Purcellville Joint Land Management Area.

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**Western High School at Fields Farm, SPEX 2006-0022**

**Planning Commission Worksession, April 9, 2007**

**CONDITIONS OF APPROVAL**

1. **Special Exception Plat.** The property shall be developed in substantial conformance with the Special Exception Plat, HS-3, High School at Fields Farm Property prepared by Timmons Group, dated June 20, 2006 and revised through February 22, 2007. Approval of this public school use does not relieve the applicant of any Zoning Ordinance, Codified Ordinance, or any other requirement.
2. **Water Supply and Sanitary Sewer.** The applicant shall submit required studies to the Loudoun County Health Department that demonstrate that sufficient potable water is available to serve the proposed use prior to site plan approval. The applicant shall also submit additional information prior to site plan approval as requested by the Loudoun County Health Department concerning the design of the proposed septic system, which shall be necessary prior to a septic permit being issued. Water and wastewater systems shall operate in accordance with the conditions attached to said permits issued by the Loudoun County Health Department.
3. **Transportation Improvements.** Proposed roadway improvements to occur prior to issuance of a Certificate of Occupancy school occupancy are:
  - Allder School Road and school entrance – Westbound left turn lane
  - Allder School Road and Route 611 – Eastbound right turn lane
  - Allder School Road and Route 690 – Roundabout
  - Route 690 and Route 9 – Contribute fair share of \$97,500 for roundabout or other intersection improvement
  - Regional road contribution (\$136,407) – anticipated for use with Route 690/Route 9 roundabout

In case that the Route 690/Route 9 roundabout is not constructed, the fair share amount will be used for other improvement at the Route 690/Route 9 intersection, taking into account the offset driveway for Hillsboro Elementary School.

**ATTACHMENT 2**

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Within one year of Certificate of Occupancy:

- Hirst Drive and Hatcher Avenue – Southbound left turn lane and westbound right turn lane
  - Hirst Drive and Maple Avenue – Eastbound right turn lane, westbound left turn lane, and northbound right turn lane
4. **Lighting.** Signage and lighting will conform to Section 5-1200 and Section 5-1500 of the Revised 1993 Loudoun County Zoning Ordinance and as necessary for safety and security. Signage will be applied separately. Site building and parking lot lighting shall be designed and constructed with cut-off and fully-shielded fixtures so that light is directed inward and downward toward the athletic field or interior of the property, respectively, away from adjacent streets and properties. Parking lot lighting shall be turned off within one hour following the end of evening activities, or by 11 p.m., whichever occurs first. Athletic field lighting shall be turned off by 11 p.m. and shall be directed inward and downward toward the fields, incorporate a reflector technology system that directs light onto the field and minimizes glare and spillage, and reduces energy and maintenance costs.
  5. **Noise.** Installation of the outdoor public address system shall be limited to the stadium/track and the high school baseball and softball fields. Noise emanating from the public address system shall not exceed 60 dBA at the property boundaries and use of the system shall be prohibited after 11 p.m.
  6. **Parking.** Parking will meet or exceed the requirements of the Revised 1993 Loudoun County Zoning Ordinance, Section 5-1100.
  7. **Fire Safety.** The school building will be sprinklered, and fire hydrants will be provided in accordance with the Loudoun County Facilities Standards Manual.
  8. **Building and Site Design.** Stormwater management and Best Management Practices (BMP) will be provided on site in accordance with the Virginia Stormwater Management Handbook and the Loudoun County Facilities Standards Manual. Bioretention basins will be submitted to Loudoun County for approval prior to site plan approval.

9. **Previous Approvals.** The parcel is subject to SPEX 2004-0009 Fields Farm Property-Upper Loudoun Youth Football League Recreation Facility plat and conditions of approval; STPL 2002-0084, Mountain View Elementary School; STPL 2001-0113, Purcellville (Mountain View) Elementary School; CPAP 2003-0025, Wetland Mitigation at Purcellville.
10. **Sediment & Erosion Control.** Sediment and erosion control will be provided in accordance with the Virginia Erosion and Sediment Control Handbook.
11. **Unpaved Roadway.** The Loudoun County Public Schools Bus Transport Division will restrict school bus usage of the unpaved section of Route 711 between Routes 287 and 611 except to pick-up/drop-off students, or unless traffic conditions warrant use of the unpaved section. Additionally, although the Loudoun County Public Schools lacks control over private vehicles using the unpaved portion of Alder School Road, the school district shall provide information to students who would drive to school of the best routes to use for travel to the school that would not include that section of Alder School Road.
12. **Transportation Improvements Implementation.** Impacts to roadways will be experienced upon the opening of the proposed school, however, certain roadways and transportation routes will not be affected as greatly as other roadways and routes. In order to provide the greatest mitigation for traffic and alleviate school overcrowding, as many as two of the proposed transportation improvements may be completed up to one year following the issuance of a Certificate of Occupancy for the proposed school.
- Hirst Drive and Hatcher Avenue – Southbound left turn lane and westbound right turn lane
  - Hirst Drive and Maple Avenue – Eastbound right turn lane, westbound left turn lane, and northbound right turn lane
13. **Reforestation of River and Stream Corridors.** Loudoun County Public Schools shall work with the Loudoun County Arborist on reforestation measures for the river and stream corridor. Such reforestation measures shall be to the satisfaction of the County Arborist and a plan for restoration measures shall be submitted to the County Arborist prior to site plan approval.

14. **Water Conservation.** The Loudoun County Public Schools shall install low-flow toilets in all bathrooms in the high school and associated facilities prior to the issuance of a Certificate of Occupancy. No-flow urinals shall be installed on a trial basis in teacher and staff bathrooms with appropriate education provided on the use of such fixtures. Such installation may include additional back-up plumbing to be used in case of failure of the no-flow option. Other water conservation measures may include a rooftop rainfall collection system that may be used in conjunction with irrigation systems.
15. **Alder School Road Sidewalk.** A trail on the south side of the floodplain that exists on the south side of Alder School Road shall be used as a sidewalk for the Alder School Road frontage and shall extend eastward to the property line.
16. **Construction Entrance.** An existing gravel driveway that is located to the east of 36841 Alder School Road shall be used as the primary construction vehicle entrance, and upon completion of construction shall be maintained for emergency fire and rescue access. A limited number of heavier construction vehicles may enter the site via the existing Mountain View Elementary School driveway. Contractors will be instructed to avoid residential neighborhoods and use Route 690 and Route 611 to and from Alder School Road, and will also avoid travel during peak commuter and school travel periods. Construction deliveries will take place between 7 a.m. and 5 p.m.
17. **50-foot Conservation Buffer.** A 50-foot conservation buffer along all floodplains on the subject property shall be maintained. A minor encroachment for a sanitary facility as designated on the Special Exception plat shall not constitute a violation of this condition.
18. **Alder Road Snow/Ice Removal.** Road maintenance for Alder School Road (Route 711) is the responsibility of the Virginia Department of Transportation (VDOT), which maintains guidelines for snow and ice removal and treatment for classes of roadways. Loudoun County Public Schools shall consult with VDOT and request that Alder School Road in the vicinity of the high school entrance driveway be considered a priority "hot spot" for snow and ice removal and treatment.

19. **Memorialization of Farmstead Complex.** Loudoun County Public Schools shall permanently provide space within, and also on the grounds of, the high school for memorialization of the farmstead complex formerly a part of Fields Farm. Such memorialization may consist of artifacts, photographs, documents or other written material, and plaques or markers, that note the existence of Fields Farm, the farm's historical context, and depict Western Loudoun County farm life during the Reconstruction and Growth Period (1865-1917). Such space for memorialization shall be provided by the time that a Certificate of Occupancy is issued and may be enhanced after the school opens.

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Loudoun County, Virginia

[www.loudoun.gov](http://www.loudoun.gov)

Office of the County Administrator

1 Harrison Street, S.E., 5th Floor, P.O. Box 7000, Leesburg, VA 20177-7000

Telephone (703) 777-0200 • Fax (703) 777-0325

At a business meeting of the Board of Supervisors of Loudoun County, Virginia, held in the County Government Center, Board of Supervisors' Meeting Room, 1 Harrison St., S.E., Leesburg, Virginia, on Tuesday, October 4, 2005 at 9:30 a.m.

PRESENT: Scott K. York, Chairman  
Bruce E. Tulloch, Vice Chairman  
James G. Burton  
James E. Clem  
Eugene A. Delgaudio  
Sally Kurtz  
Stephen J. Snow  
Mick Staton Jr.  
Lori L. Waters

IN RE: BOARD MEMBER INITIATIVE / REQUEST TEMPORARY PUMP AND HAUL TO SERVE THE ULYFL STADIUM AT THE FIELDS PROPERTY, L.C.T.M. /35/////21-1/, PIN: 522-29-5928, ADDRESS: 36869 ALLDER SCHOOL ROAD, PURCELLVILLE

Mr. Burton moved that the Board of Supervisors approve a permanent pump and haul, with a reservation for the drainfield if needed as a long term solution, for the ULYFL Stadium located on the Fields Property in Purcellville, Virginia, subject to all costs being borne by the ULYFL; and amended to include that this be reviewed on an annual basis.

Seconded by Mr. Clem.

Voting on the Motion: Supervisors Burton, Clem, Delgaudio, Kurtz, Snow, Staton, Tulloch, Waters, and York - Yes; None - No.

COPY TESTE:

DEPUTY CLERK FOR THE LOUDOUN  
COUNTY BOARD OF SUPERVISORS

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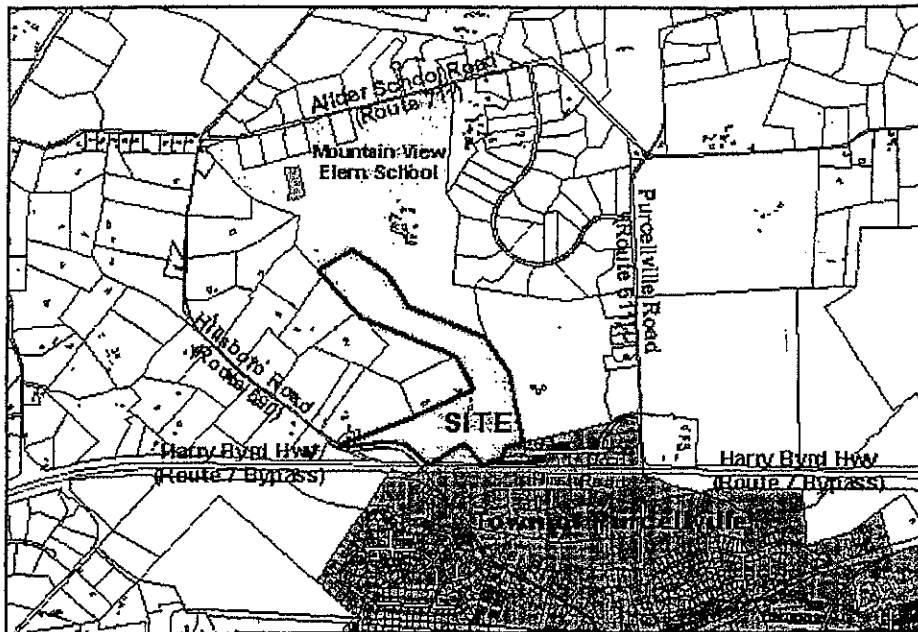
ATTACHMENT 3

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VICINITY MAP – ATTACHMENT 1



VICINITY MAP



**Directions:**

From Leesburg, take Route 7 (Harry Byrd Highway) west to the Route 287 exit in Purcellville. Turn left (south) on Route 287, proceed under the Route 7 overpass, and turn right on Hirst Road. Proceed west on Hirst Road until it ends at Route 690 (21<sup>st</sup> Street North/Hillsboro Road). Turn right (north) on Route 690, and proceed across the bridge over Route 7. The site is on the right, immediately north of Route 7. Access to the site is via the existing driveway under the Centerfield Farm sign.



**Va. Dept. of Health Sewage Handling & Disposal Regulations/Pump & Haul  
ATTACHMENT 2**

**Virginia Department of Health - Sewage Handling and Disposal Regulations**

**TITLE 12. HEALTH**

**Title of Regulation:** 12 VAC 5-610-10 et seq. Sewage Handling and Disposal Regulations.

**PART IV**

**General Criteria for the Selection of a Wastewater Treatment and Disposal System Based on Site Conditions**

**Article 4: Pump and Haul of Sewage, P 32**

**12 VAC 5-610-598. General.**

Pump and haul pertains to an unusual circumstance wherein sewage is permitted to be transported by vehicle to a point of disposal. Pump and haul includes all facilities and appurtenances necessary to collect and store the sewage for handling by a contractor having a valid sewage handling permit.

**12 VAC 5-610-599. Permanent pumping and hauling.**

Pumping and hauling on a permanent basis is prohibited unless done under the auspices and supervision of a government entity as provided for in 12 VAC 5-610-599.3 (see subdivision 2 of 12 VAC 5-610-410 for exception). Pumping and hauling for over one year shall be considered as a permanent pumping and hauling operation.

**12 VAC 5-610-599.1. Emergency pumping and hauling.**

When serious malfunctioning of an existing sewage disposal system, sewerage system or treatment works occurs, pumping and hauling may be authorized for a definite time period until the malfunctioning system can be reconstructed or repaired.

**12 VAC 5-610-599.2. Temporary pumping and hauling.**

Temporary pumping and hauling may be permitted under the following conditions:

1. It must be demonstrated that the temporary pumping and hauling of sewage is not the usual practice in order to permit premature and unplanned real estate or commercial development in an area where sewerage facilities do not exist;
2. Construction of an approved sewerage system or treatment works is actively in progress with personnel and machinery at work in the particular area. Bonding, cash escrow or other assurances shall be required to guarantee completion of the sewerage system and/or treatment works;
3. The completion of the sewerage system or treatment works is assured and a completion date within the definition of temporary pumping and hauling has been set; and
4. Any and all delays from the anticipated completion date shall be reported immediately by the holder of the pump and haul permit to the district or local health department. Delays not resulting from circumstances beyond the control of the holder of the pump and haul permit shall be grounds for revocation of the pump and haul permit.

**12 VAC 5-610-599.3. Permanent pump and haul.**

Permanent pumping and hauling of sewage may be permitted under the following conditions:

1. That the government entity enter into a contract with the department setting forth that the government entity will provide pump and haul services, either directly or through a private contractor holding a sewage handling permit, to the home(s), commercial establishment(s) or occupied structure(s) for the period the occupied structure is utilized or until connection can be made to an approved sewerage facility;
2. Upon completion of the contract between the department and the government entity, the commissioner shall issue a single pump and haul permit to the government entity. A separate construction permit shall be issued to the government entity for each sewage storage facility. The sewage storage facility(s) shall be designed and constructed in accordance with Article 7 (12 VAC 5-610-990 et seq.) of Part V of this chapter; and
3. When the government entity provides the sewage pump and haul services, it shall conform to the conditions contained in 12 VAC 5-610-380 and Article 8 (12 VAC 5-610-1020 et seq.) of Part V of this chapter.

M I N U T E S

LOUDOUN COUNTY BOARD OF SUPERVISORS

OCTOBER 4, 2005

At a business meeting of the Board of Supervisors of Loudoun County, Virginia, held at the County Government Center in the Board of Supervisors' Meeting Room, 1 Harrison Street, SE, Leesburg, Virginia on Tuesday, October 4, 2005, at 9:30 a.m.

PRESENT: Scott K. York, Chairman  
Bruce E. Tulloch, Vice Chairman  
James G. Burton  
James E. Clem  
Eugene A. Delgaudio  
Sally Kurtz  
Stephen J. Snow  
Mick Staton Jr.  
Lori L. Waters

IN RE: CALL TO ORDER

Chairman York called the meeting to order.

Supervisor Clem gave the invocation and led the pledge of allegiance.

IN RE: RESOLUTION OF COMMENDATION/ EVERETT WILLIAM "PEANUT"  
SUTPHIN, JR.

Supervisor Clem moved that the Board of Supervisors approve a Resolution of Appreciation for Everett William "Peanut" Sutphin, Jr. for 24 years of dedication teaching automotive service technology at Monroe Technology Center (Attached at the conclusion of these Minutes). Seconded by Chairman York. The motion passed 8-0-1, Supervisors Waters absent for the vote.

Supervisor Clem announced that the Resolution of Appreciation would be presented to Mr. Sutphin at the October 11th Public Hearing.

IN RE: DOMESTIC VIOLENCE AND SEXUAL ASSAULT AWARENESS MONTH  
PROCLAMATION

Supervisor Snow moved that the Board of Supervisors approve the recommendation of the Domestic Violence and Assault Coalition to approve a Proclamation declaring the month of October 2005 as Domestic Violence and Sexual Assault Awareness Month in Loudoun County (Attached at the conclusion of these Minutes). Seconded by Chairman York. The motion passed 8-0-1, Supervisor Waters

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OCTOBER 4, 2005  
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Supervisor Snow made an amendment and moved to withdraw the following sentences "Construction of a permanent park and ride lots to serve the Town of Leesburg and the South Riding area are urgently needed. The next phase of the Dulles Rail project to Route 772 in Ashburn is needed. Recognizing the growing demand for service in the path of the rail line," Seconded by Supervisor Delgaudio. The motion failed 3-6, Supervisors Delgaudio, Snow, and Waters voted yes.

Supervisor Staton's motion passed 9-0. (This item had been included in the October 24, 2005 Transportation/Land Use Committee Agenda).

IN RE: BOARD MEMBER INITIATIVE / REQUEST ~~TEMPORARY~~ PERMANENT  
PUMP AND HAUL TO SERVE THE ULYFL STADIUM AT THE FIELDS  
PROPERTY, L.C.T.M. /35/////21-1/, PIN: 522-29-5928,  
ADDRESS: 36869 ALLDER SCHOOL ROAD, PURCELLVILLE

Supervisor Burton moved that the Board of Supervisors approve a permanent pump and haul, with a reservation for the drainfield if needed as a long term solution, for the ULYFL Stadium located on the Fields Property in Purcellville, Virginia, subject to all costs being borne by the ULYFL. Seconded by Supervisor Clem.

Several Board members questioned the change of the request from "temporary" to "permanent" pump and haul.

Supervisor Burton accepted Chairman York's friendly amendment to the motion to include an annual review of this pump and haul.

Supervisor Burton's motion passed 9-0.

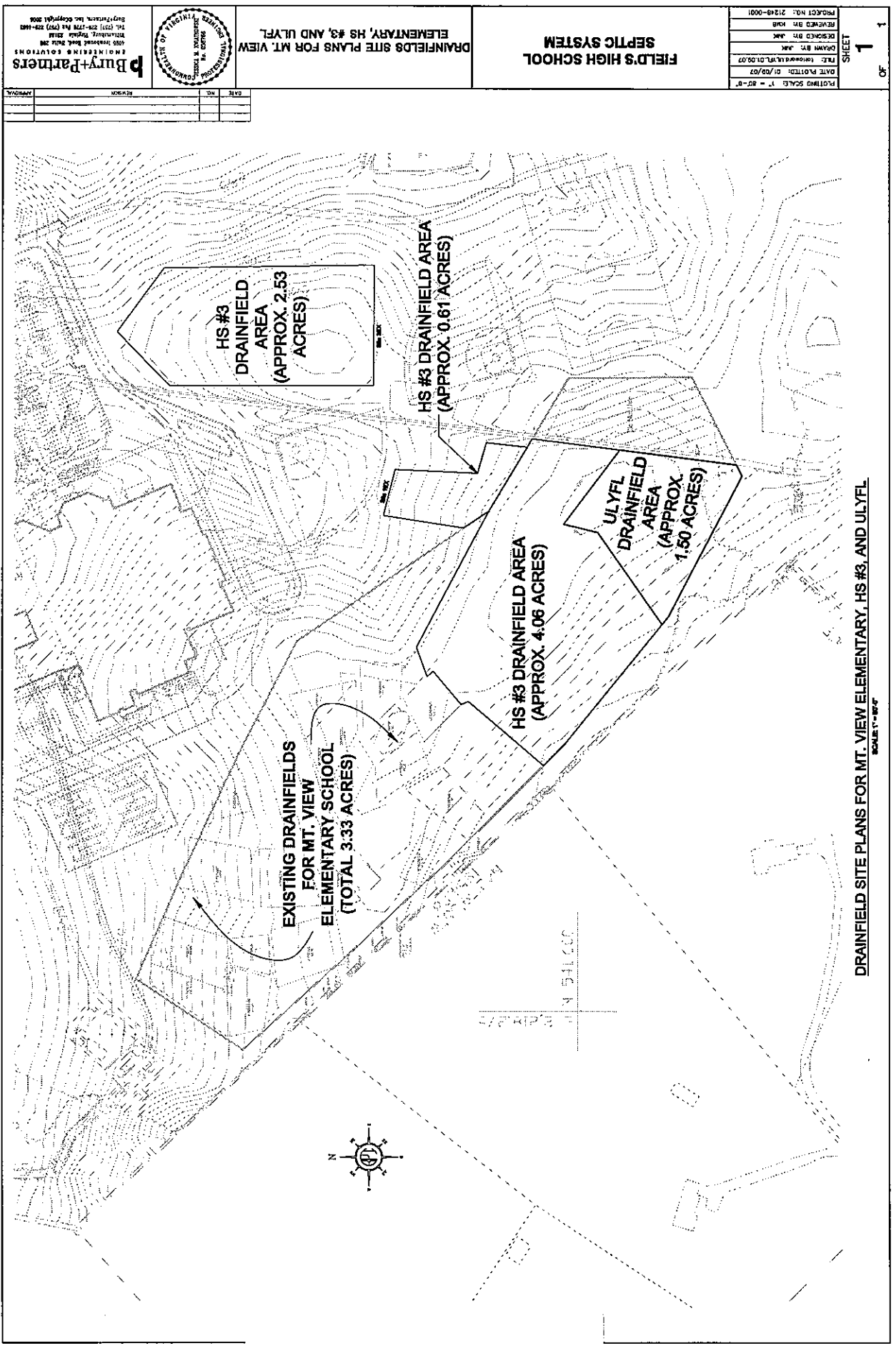
IN RE: TAX RATE REDUCTION

Supervisor Staton added this item to the agenda to begin the process of possibly providing County residents a mid-year tax rate reduction. He was advised by the County Attorney that the Code of Virginia provided counties that tax on a calendar year basis to change its tax rate up to the time the land book was delivered. It was noted that the County's tax rate for this year could not be changed because the land book had been delivered.

IN RE: CLOSED SESSION

Vice Chairman Tulloch moved that the Board of Supervisors recess the regular meeting and enter into Executive Session to consult with counsel on a claim to the Board and pending litigation, and to discuss property acquisition. Seconded by Supervisor Waters. The motion passed 7-0-2, Supervisors Clem and Kurtz absent for the vote.

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M I N U T E S

LOUDOUN COUNTY BOARD OF SUPERVISORS

DECEMBER 21, 2004

At a business meeting of the Board of Supervisors of Loudoun County, Virginia, held at the County Government Center in the Board of Supervisors' Meeting Room, 1 Harrison Street, SE, Leesburg, Virginia on Tuesday, December 21, 2004, at 9:30 a.m.

PRESENT: Scott K. York, Chairman  
Bruce E. Tulloch, Vice Chairman  
James G. Burton  
James E. Clem  
Eugene A. Delgaudio  
Sally Kurtz  
Stephen J. Snow  
Mick Staton Jr.  
Lori L. Waters

IN RE: CALL TO ORDER

Chairman York called the meeting to order.

Vice Chairman Tulloch gave the invocation and led the pledge of allegiance.

IN RE: PUBLIC SAFETY COMMITTEE REPORT / JOINT FIRE AND RESCUE  
STATION LEASE AGREEMENT: COUNTY OF  
LOUDOUN/PURCELLVILLE VOLUNTEER FIRE COMPANY NO.  
2/PURCELLVILLE VOLUNTEER RESCUE SQUAD NO. 14

Supervisor Clem moved that the Board of Supervisors approve the recommendation of Public Safety Committee that the Board enter into the proposed 30-year lease agreement that is Attachment 1 with Purcellville Volunteer Fire Company No. 2 and Purcellville Volunteer Rescue Squad Company 14 for the design, construction, and occupation of a new fire and rescue station in the Purcellville area and subject to any and all necessary technical changes as warranted. Seconded by Supervisor Burton.

Several Board members thanked the efforts of Supervisors Clem and Burton, and the Public Safety Committee for making this happen.

ATTACHMENT 5

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PRELIMINARY FY 04 FINANCIAL CONDITION / RECOMMENDED  
USE OF FUND BALANCE

Supervisor Staton moved that the Board of Supervisors authorize a February 8, 2005 public hearing to designate the FY 04 General Fund and Public Safety Communications Fund balances for the following uses: \$12,000,000 toward real property tax rate reduction in FY 06, \$200,000 for network system upgrades, \$500,000 as a contingency for analysis of proposed Comprehensive Plan Amendments, \$500,000 for repair of the roof at the County Government Center, and \$2,000,000 in the Public Safety Communications Fund for system replacement and equipment and that the Board direct the County Administrator to identify essential needs for the \$1,988,361 remaining in FY 04 General Fund balance. Seconded by Supervisor Delgaudio.

Vice Chairman Tulloch made an amendment to the motion to allocate \$3 million of the fund balance for the Claude Moore Park Community Center. Seconded by Chairman York.

Supervisor Snow noted his preference to include funding for the South Riding Fire and Rescue Sheriff's Station and the Broadlands Fire and Rescue Sheriff's Station. He was advised to make a separate motion at a later time.

Supervisors Burton and Kurtz noted their preference to allocate some funds for the Dominion Virginia Power issue.

Several Board members commented on their intent to use some of the fund balance to reduce the tax rate in FY06.

Supervisor Kurtz moved that the Board of Supervisor table this item. Seconded by Supervisor Clem. The motion passed 8-0-1, Supervisor Snow absent for the vote.

IN RE: RECESSED

The Board recessed at 1:00 p.m. for lunch and reconvened the meeting at 1:30 p.m.

IN RE: LAND USE COMMITTEE REPORT / SPEX 2004-0014 / RED CEDAR  
WASTEWATER DISPOSAL AREAS

Supervisor Snow moved that the Board of Supervisors approve SPEX 2004-0014, Red Cedar Wastewater Disposal Areas subject to the



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BOARD OF SUPERVISORS  
DECEMBER 21, 2004  
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attached findings and conditions of approval, as recommended by the Land Use Committee (attached at the conclusion of these Minutes). Seconded by Chairman York. The motion passed 6-0-3; Supervisors Waters, Tulloch, and Clem absent for the vote.

IN RE: ECONOMIC DEVELOPMENT COMMITTEE REPORT/INITIATIVE ON  
BROADBAND SERVICES

Supervisor Waters moved that the Board of Supervisors direct the County Administrator to establish a two year (1 FTE) temporary position to facilitate broadband services in the County and to fund the cost of the position's salary, benefits, and start-up and operational costs for the remainder of FY05 in the amount of \$100,000 and \$200,000 for FY06 with funding provided by cable franchise revenues. Seconded by Chairman York.

Supervisor Snow believed that broadband should be brought forward by market forces and that this effort was a frivolous expenditure.

Supervisors Burton, Kurtz, York, Tulloch and Waters expressed their support of this motion. They noted that they believed that this was a good investment. They also expressed the need to have an expert who could understand broadband issues and help position the County in the next 20 years. It was noted by Supervisor Waters that this was an economic development issue and that the County needed to compete. Supervisor Burton supported the hiring of an FTE, but expressed his opposition of the County building the loop.

Supervisor Waters' motion passed 8-1, Supervisor Snow voted no.

IN RE: REMARKS BY VICE CHAIRMAN TULLOCH

Vice Chairman Tulloch made his presentation to the Board on the challenges and accomplishments of the Board in 2004, and the direction the Board would take for the future. He also presented his suggested Committees and memberships for 2005 (attached at the conclusion of these Minutes).

IN RE: FINANCE/GOVERNMENT SERVICES COMMITTEE REPORT/  
PRELIMINARY FY 04 FINANCIAL CONDITION / RECOMMENDED  
USE OF FUND BALANCE (Continued)

**BOARD OF SUPERVISORS  
ACTION ITEM**

**# 19**

**SUBJECT:** Land Use Committee Report 1  
SPEX 2004-0014, Red Cedar Wastewater Disposal Areas

**ELECTION DISTRICT:** Catoctin

**CRITICAL ACTION DATE:** December 31, 2004

**RECOMMENDATIONS:**

**Land Use Committee:** The Land Use Committee voted unanimously to forward this application to the Board of Supervisors with a recommendation of approval subject to the attached conditions of approval.

**Planning Commission:** The Planning Commission voted (6-0-3, Whitmore, Hsu and Volpe absent) to forward this application to the Board of Supervisors with a recommendation of approval subject to the attached findings and conditions of approval.

**Staff:** Staff recommends approval of the application subject to the attached findings and conditions of approval.

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**BACKGROUND:** Pulte Homes Corporation of Fairfax, Virginia, has submitted an application for a Special Exception to identify the primary and secondary wastewater disposal areas on the previously approved Concept Development Plan for ZMAP 2000-0007, Red Cedar. The wastewater disposal areas will serve a communal wastewater disposal facility previously approved for Red Cedar. The portion of the property subject to this application is approximately 151 acres in size and is located on Evergreen Mills Road (Route 621).

The Board of Supervisors reviewed the application at the December 14, 2004 public hearing at which two members of the public spoke. One expressed concerns about the system and the other requested that the Board review the proposal in more detail. The Board forwarded the application to the December 15, 2004 Land Use Committee meeting for further review.

The Land Use Committee reviewed this application at the December 15, 2004 meeting and discussed several issues pertaining to the environmental impacts of the system, the level of treatment and costs associated with the communal wastewater treatment plant, the service area of the treatment plant and the concept of the integrated communal systems. The Committee was satisfied with the responses from the Loudoun County Sanitation Authority (LCSA) that the treatment technology used would achieve a 99.999% viral removal rate, well above what is required under state standards. The proposed treatment technology i.e., membrane technology, has been in use for several years and is not an experimental technology. Staff noted that discharges would not result in waterlogging or ground saturation as treated effluent would be discharged in micro-doses. Furthermore, LCSA would test groundwater quality in monitoring wells around the drainfields at two-month intervals and execute any necessary remedial measures, should the proposed use result in any impacts to surrounding properties.

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Staff further noted that under the concept of the Integrated Communal Systems the service area for the communal wastewater treatment plant encompasses all properties within the Lower Sycolin subarea of the Transition Policy Area. However, the treated effluent from this plant would be returned to the individual development sites for the disposal. The disposal areas that are the subject of this application are intended to serve only the Red Cedar development, not the entire Lower Sycolin subarea. The Land Use Committee forwarded the application with a recommendation of approval to the December 21, 2004 Board of Supervisors Business Meeting for action.

**ISSUES:** Subsequent to the Land Use Committee meeting, a meeting was held to address concerns raised by adjacent property owners. Another meeting is scheduled for December 20, 2004 to continue these discussions. Staff will provide an update to the Board at the Business Meeting.

**FISCAL IMPACT:** There is no discernible, immediate impact on County expenditures associated with this use. The proposed communal wastewater disposal areas will be part of a public facility owned and operated by the Loudoun County Sanitation Authority. The full costs associated with the construction of the disposal areas will be borne by the applicant, reimbursed through "Connection/Availability" fees charged to homeowners. Subsequent operation and maintenance costs will be funded through homeowner fees.

**ALTERNATIVES:** The Board of Supervisors may approve, deny or continue its review of the application. A timeline extension will be required if further review is recommended.

**DRAFT MOTION(S):**

1. I move that the Board of Supervisors approve SPEX 2004-0014, Red Cedar Wastewater Disposal Areas subject to the attached findings and conditions of approval, as recommended by the Land Use Committee.

OR

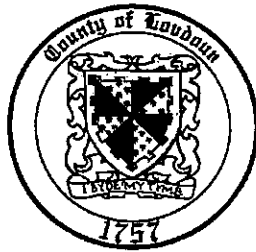
2. I move an alternate motion.

**ATTACHMENTS:**

1. Vicinity Map
2. Findings
3. Conditions of Approval

**STAFF CONTACT:** Jo Ramesh, Department of Planning

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# # 11

## DEPARTMENT OF PLANNING STAFF REPORT

### BOARD OF SUPERVISORS PUBLIC HEARING

**DATE OF HEARING: December 14, 2004**

**SPEX 2004-0014—Red Cedar Wastewater Disposal Areas**

**DECISION DEADLINE: December 31, 2004**

**ELECTION DISTRICT: Catoctin**

**PROJECT PLANNER: Jo Ramesh, AICP**

#### EXECUTIVE SUMMARY

Pulte Homes Corporation of Fairfax, Virginia, has submitted an application for a Special Exception to identify the primary and secondary wastewater disposal areas on the previously approved Concept Development Plan for ZMAP 2000-0007, Red Cedar in the Planned Development – Rural Village (PD-RV) zoning district. The wastewater disposal areas will serve a communal wastewater disposal facility previously approved for Red Cedar (ZMAP 2000-0007, Red Cedar). This application is subject to the Revised 1993 Zoning Ordinance and the proposed use is a Special Exception use under Section 4-1210 (A) (5). The portion of the property subject to this application is approximately 151 acres in size and is located on Evergreen Mills Road (Route 621). The area is governed by the policies of the Revised General Plan which designate this area as part of the Lower Sycolin subarea of the Transition Policy Area. The Revised General Plan designates this area for residential development in the form of residential clusters at densities of up to 1 dwelling unit per 10 acres with an option to rezone to the rural villages at densities of up to 1 dwelling unit per 3 acres pursuant to the requirements of the Planned Development – Rural Village (PD-RV) zoning district.

#### RECOMMENDATION

The Planning Commission reviewed this application at the November 15, 2004 public hearing and forwarded it to a committee for further discussion. The Commission will meet on December 6, 2004 with an anticipated recommendation on this application. Staff will provide an update to the Board at the public hearing. Staff recommends approval of this application subject to the conditions of approval identified in this staff report.

#### SUGGESTED MOTIONS

1. I move that the Board of Supervisors forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas to the December 21, 2004 business meeting for action.

OR

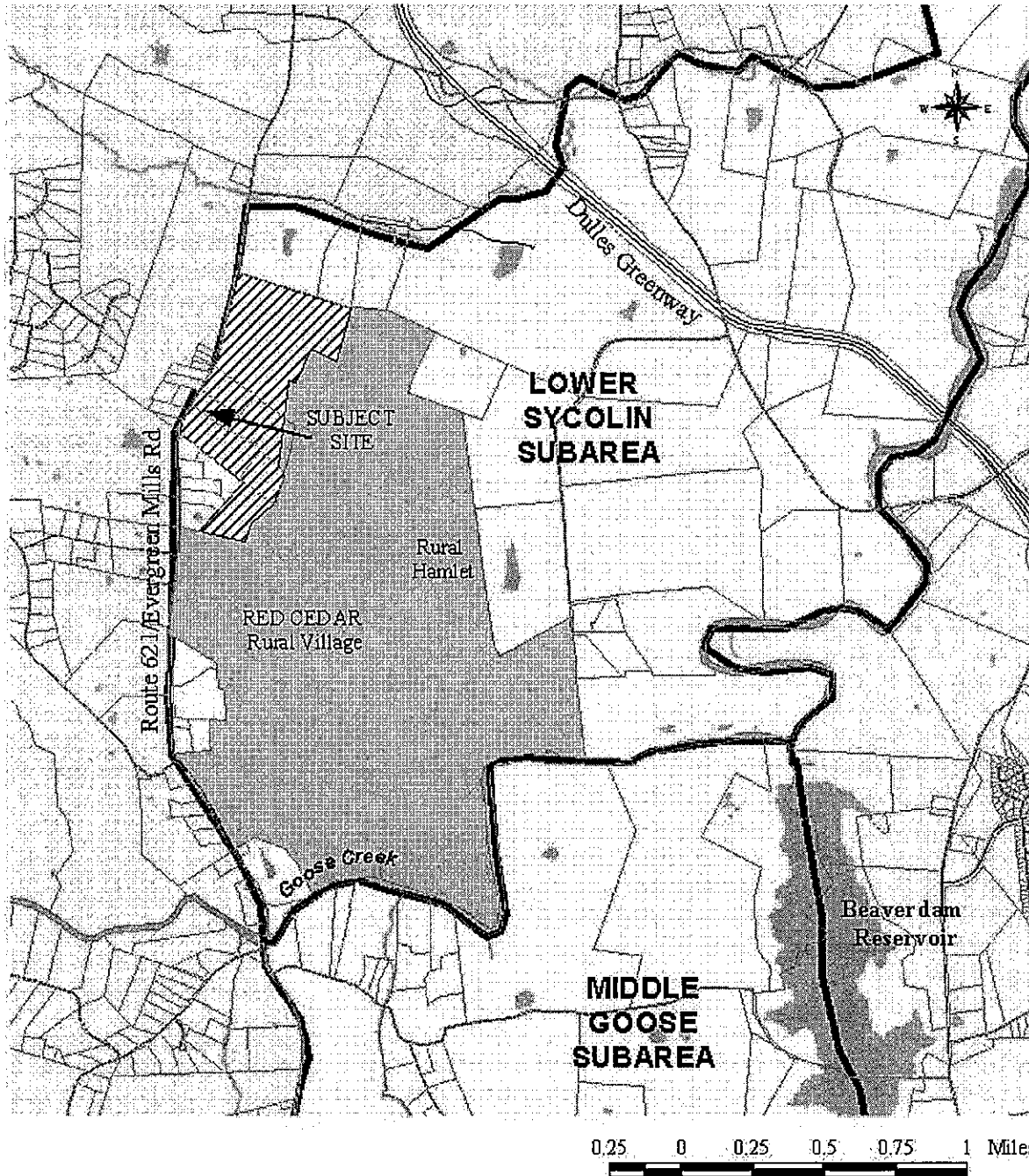
2. I move that the Board of Supervisors forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas to the Land Use Committee for further discussion.

OR

3. I move an alternate motion.

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VICINITY MAP



**Directions:**

From Leesburg, take U.S. Route 15 (James Monroe Highway) south to Route 621 (Evergreen Mills Road). Turn left on Route 621 (Evergreen Mills Road) and proceed south approximately 3 ½ miles. The property extends along Route 621 for a distance of approximately 1 mile to the east.

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**I. APPLICATION INFORMATION**

**APPLICANT**

Pulte Home Corporation  
Greg May  
10600 Arrowhead Drive, #225  
Fairfax, Virginia 20030  
(703) 934-9300

**REPRESENTATIVE**

Vollmer Associates LLP  
David L. Bowers, P.E.  
P. O. Box 955  
Leesburg, Virginia 20178. (703) 777-0063 Extn: 13

Reed Smith LLP  
Mike Banzhaf.  
44084 Riverside Parkway, Suite 300  
Leesburg, Virginia – 20176. (703) 729-8545

**APPLICANT'S REQUEST**

To identify the primary and secondary (reserve) wastewater disposal areas on the previously approved Concept Development Plan for ZMAP 2000-0007, Red Cedar

**LOCATION**

East side of Route 621 (Evergreen Mills Road) approximately 3.5 miles south of the intersection of Route 621 (Evergreen Mills Road) and U. S. Route 15 (James Monroe Highway) in the Catoctin Election District

**TAX MAP/PARCEL #s**

Tax Map /60///4/////1/ (MCPI 277-20-6457),  
Tax Map /60///4/////2/ (MCPI 237-25-3303),  
Tax Map /60///4/////5/ (MCPI 277-10-7444),  
Tax Map /60///4/////6/ (MCPI 277-10-2784),  
Tax Map /60///4/////7/ (MCPI 277-20-4520),  
Tax Map /77/////////5/ (MCPI 238-36-6457) (portion),  
Tax Map /60///4/////3/ (MCPI 237-15-6561) (portion),  
Tax Map /60///4/////4/ (MCPI 238-45-4573) (portion).

**ZONING**

Planned Development – Rural Village (PD-RV)

**ACREAGE OF SITE**

Approximately 151 acres

**SURROUNDING ZONING / LAND USES**

	<b>ZONING</b>	<b>PRESENT LAND USES</b>
North	TR-10	Residential, Vacant
South	TR-10	Residential, Vacant
East	TR-10	Residential, Vacant
West	AR-1	Agriculture, Residential, Vacant, County Landfill

II. SUMMARY OF DISCUSSION	
Topic/Issue Area	Issues Examined and Status
Comprehensive Plan	Conforms to the policies of the <u>Revised General Plan</u> and Proffers associated with the ZMAP 2000-0007, Red Cedar. There are no outstanding issues.
Zoning	Complies with the <u>Revised 1993 Zoning Ordinance</u> requirements and Proffers associated with ZMAP 2000-0007, Red Cedar. There are no outstanding issues.
Utilities (Health Department & Loudoun County Sanitation Authority)	Adequate utility provisions to the site. There are no outstanding issues.
Conditions of Approval	Conditions provide for (1) substantial conformance with SPEX plat, (2) use of reserve wastewater disposal fields after the primary disposal area fails, (3) consideration of alternate utility options, disposal sites and technology prior to using the reserve disposal area, (4) phasing of reserve disposal area, (5) replacement of trees damaged by the wastewater disposal system and the technology used within the reserve disposal area, and (6) restriction on the use of fill materials in the reserve disposal area. The applicant and LCSA agree with the proposed conditions of approval.

### III. PLANNING COMMISSION REVIEW

The Planning Commission reviewed the application at the November 15, 2004 public hearing. Three members of the public spoke regarding this application and expressed concern that their properties, which would be surrounded by the proposed disposal areas, would be adversely impacted by the proposed wastewater disposal system. Concerns included an increase in surface water, contamination to surface and ground water, odors and the high-maintenance requirements associated with such systems. Concern was also expressed that the operation of the drip irrigation system would be impacted by freezing and soil compaction caused by vehicles driven over it. Speakers noted that ground saturation could convert existing farmlands into habitats for rodents and mosquitoes. It was also noted that at the time of the Red Cedar rezoning application, the treated effluent was intended to irrigate a proposed golf course, and it was not identified that this would be disposed within 'Big Woods'.

The Commission raised several questions regarding the financial feasibility of extending central sewer to the site and requested additional information on the subject. The Commission forwarded the application to a committee for further discussion and requested that the Loudoun County Sanitation Authority (LCSA) answer the following questions:



1. What is the status of the communal wastewater treatment plant?
2. What is the total cost associated with extending central wastewater services to this site?
3. Develop a map showing where the central sewer line is currently located. How will this central sewer line reach the property?
4. Provide cost estimates, both in the short-term and long-term, comparing the costs associated with a communal wastewater system, the integrated communal wastewater system and central systems?
5. What is the status of the planned extension of central utilities to this area and what are the trigger points?

The Commission also directed the applicant to meet with adjoining property owners regarding this application. The committee meeting is scheduled for December 6, 2004. Staff will provide the Planning Commission's recommendation at the Board Public Hearing.

#### IV. SPECIAL EXCEPTION CONDITIONS OF APPROVAL

1. The property shall be developed in substantial conformance with the Special Exception Plats dated June 2004 and revised through 11/12/04, prepared by Bowers & Associates, Ltd. Approval of this application does not relieve the applicant of any Zoning Ordinance, Codified Ordinance or any other requirements.
2. The Primary Wastewater Disposal Area shall be utilized by the Loudoun County Sanitation Authority (LCSA) first before the use of any drainfields shown in the Reserve Wastewater Disposal Area.
3. Should the Primary Wastewater Disposal Area (as depicted on the Special Exception Plats dated June 2004) fail to operate properly and the Reserve Disposal Area be required, the LCSA shall, before using the Reserve Disposal Area within Big Woods, demonstrate to the satisfaction of the County that the following alternative utility options are not feasible in the order of priority listed below
  - a. Connect to central wastewater services, if central wastewater lines are planned for the subject property and available at the property line or within 300-feet of the property line. Connections to a central wastewater system shall not be required where it is shown that such an option is not financially feasible, i.e., places an undue burden on homeowners or the cost of connecting to such a system exceeds the public benefit.
  - b. Utilize an alternate below-grade soil disposal technology, 'more current' than that approved under this Special Exception to be utilized in the Big Woods Area. The alternate technology is defined as one that causes less impact to the ground cover and tree canopy, both during its installation and subsequent operation and maintenance than that currently approved.
  - c. Serve the development by a disposal area outside Big Woods, either within the subject property or outside the subject property in conformance with the utility policies of the County's Comprehensive Plan.
4. Should the use of the Reserve Disposal Area within Big Woods be required, the LCSA shall phase the use of drainfields such that those closer to the Primary Disposal Area are used first, before the drainfields further south on the subject site and farther away from the Primary Disposal Area are used.

5. Within the Reserve Wastewater Disposal Area in 'Big Woods', a wastewater disposal technology, such as drip irrigation, that uses buried flexible tubing for disposal shall be used. In addition, and in accordance with proffer VII.D. of the Red Cedar proffers (ZMAP 2000-0007), the extent of permitted tree clearing within any residential conservancy lot in 'Big Woods' shall not exceed 2.5 acres. A minimum of 55 acres of trees within 'Big Woods' shall be preserved, as required by proffer VII.D. If the installation and operation of the wastewater disposal system within 'Big Woods' result in the damage or destruction of trees of a caliper size 3 inches or larger, in any area beyond the tree-clearing areas allowed under proffer VII.D., these trees shall be replaced at a 2:1 ratio. Such replanting shall occur first within 'Big Woods' to ensure conformance with the Red Cedar proffers. Additional areas for replanting shall be within the areas between the drainfields within the primary wastewater disposal areas identified on the Special Exception plat.
6. The Loudoun County Sanitation Authority shall not apply any fill materials over the area of drainfields during the installation and/or subsequent operation of the reserve drainfields in 'Big Woods' without the approval of the County.

## **V. PROJECT REVIEW**

### **A. CONTEXT**

The Red Cedar property, extending over an area of approximately 1,295 acres, is located to the east of Evergreen Mills Road (Route 621) and north of Goose Creek in the Catoctin Election District. Approximately 1,075 acres of this property was rezoned to the Planned Development-Rural Village (PD-RV) zoning district (approved February 4, 2002) to allow a rural village supporting 317 residential units and up to 10,000 square feet of commercial and workplace area uses. In conjunction with ZMAP 2000-0007, the Board approved a Commission Permit application (CMPT 2000-0011) to allow a communal wastewater treatment system to serve the development. However, the location of the wastewater disposal areas was not identified on the approved concept development plan of ZMAP 2000-0007, Red Cedar (Red Cedar Rezoning).

Subsequently when an application was filed for a preliminary subdivision (SBPL 2002-0044), the general location of on-site sewage disposal areas and proposed public sewer lines had to be identified, as part of the County's review process (Loudoun County Facilities Standards Manual, Section 8.102.A.27). At that time, it was noted that these disposal areas were not identified on the Red Cedar Concept Development Plan.

Under Section 4-1210 (A) (5) of the Revised 1993 Zoning Ordinance, a special exception is required to identify "Public water and wastewater facilities including land application fields, not identified on the approved Concept Development Plan, in the Village Conservancy subdistrict" of the PD-RV zoning district. The purpose of this special exception application is therefore, to identify the primary and secondary wastewater disposal areas for the previously approved communal wastewater treatment facility for the Red Cedar Rural Village.

The preliminary subdivision application (SBPL 2002-0044) was conditionally approved by the County on August 23, 2004 with the condition that "The County shall not approve any record plat applications for any lots shown on SBPL 2002-0044 Red Cedar Rural Village until such time as a Special Exception approving the location of drainfield sites is approved" (Attachment 3)

The area subject to the proposed special exception extends across approximately 151 acres and is located in the northwest portion of the approved Red Cedar Rural Village development. Of this area, about 58 acres is identified as the 'Primary Wastewater (Subsurface Disposal)

Facility Area' and about 64 acres identified as the 'Reserve Wastewater (Subsurface Disposal) Area.' The reserve disposal area will be utilized only if the primary disposal area should require replacement. The treated effluent will be disposed through subsurface disposal mechanisms. A network of underground pipes, laid at a depth of 6" to 12" from the surface, will carry and disseminate the treated effluent in small increments into the surrounding ground (Attachment 5). The area of the primary and reserve disposal areas will be placed under an easement held by the Loudoun County Sanitation Authority, who will be responsible for the operation and maintenance of the system.

**B. SUMMARY OF OUTSTANDING ISSUES**

There are several issues that the Planning Commission is considering. At the Planning Commission public hearing, the Commission raised several questions regarding the financial feasibility of extending central sewer to the site and requested additional information on the subject. The Commission forwarded the application to a committee for further discussion and requested that the Loudoun County Sanitation Authority (LCSA) answer the following questions:

1. What is the status of the communal wastewater treatment plant?
2. What is the total cost associated with extending central wastewater services to this site?
3. Develop a map showing where the central sewer line is currently located. How will this central sewer line reach the property?
4. Provide cost estimates, both in the short-term and long-term, comparing the costs associated with a communal wastewater system, the integrated communal wastewater system and central systems?
5. What is the status of the planned extension of central utilities to this area and what are the trigger points?

The Commission also directed the applicant to meet with adjoining property owners regarding this application. The committee meeting is scheduled for December 6, 2004. Staff will provide the Planning Commission's recommendation at the Board Public Hearing.

**C. OVERALL ANALYSIS**

**COMPREHENSIVE PLAN**

The Revised General Plan designates this site as part of the Lower Sycolin subarea of the Transition Policy Area (Revised General Plan, Transition Policy Area Subareas Map, p. 8-3). The Revised General Plan designates this area for residential development in the form of residential clusters at densities of up to 1 dwelling unit per 10 acres with an option to rezone to the rural villages at densities of up to 1 dwelling unit per 3 acres pursuant to the requirements of the Planned Development – Rural Village (PD-RV) zoning district, with both development patterns maintaining a minimum of 70% of the gross area of the site as open space (Revised General Plan, Policy 2, p. 8-6). Plan policies allow for both communal and central wastewater utility systems in this area (Revised General Plan, p. 8-5).

As the proposed use serves a previously approved rezoning application for a rural village, there is no land use issue associated with this application.

## COMPLIANCE WITH ZMAP 2000-0007, RED CEDAR PROFFERS

The primary issue in the review of the subject application is its conformance with the proffers associated with ZMAP 2000-0007, Red Cedar (Red Cedar Rezoning).

During the review of the Red Cedar Rezoning application, specific tree save areas were delineated on the 1,075-acre property. The total extent of the delineated tree save areas was approximately 366 acres. Recognizing that some tree clearing would be necessary within these designated tree save areas to install the wastewater treatment facility, utilities, drainfields, home sites etc., proffers were defined to ensure that a minimum percentage (80%) of the tree save area would be preserved. Within a portion of the general tree save areas, the County and applicant identified a hardwood stand, subsequently named 'Big Woods', in the west central portion of the site. 'Big Woods' extends across 83.10 acres. To ensure the protection of this tree stand, the County and applicant agreed to additional proffers restricting disturbance within 'Big Woods'.

This special exception application proposes to place the secondary/reserve wastewater disposal area within 'Big Woods'. As such, the following proffers associated with the Red Cedar Rezoning application pertain to this special exception.

### Proffer Statement (dated December 12, 2001) (VII D. Tree Save Areas)

1. *The Applicant is committed to the preservation of trees throughout the Property. Sheet 6 of the CDP identifies the location of numerous Tree Save Areas on the Property. The Applicant shall preserve a minimum of 80% of designated Tree Save Areas, as measured from the perimeter drip line of said trees. To the extent the Applicant is able to preserve other trees in areas outside of the designated Tree Save Areas, such preserved areas shall be counted towards the minimum 80% tree save commitment. The minimum 80% tree save commitment shall be applied on a Property-wide basis (i.e., not on individual grading, subdivision or site plan basis).*
3. *Clearing within designated Tree Save Areas is anticipated for, but not limited to, what is required for the installation of the wastewater treatment facility, utilities, stormwater management facilities, home sites and related driveways, drainfields, wells, utilities and accessory structures, etc. Regardless of the basis for this clearing, a minimum of 80% of the designated Tree Save Areas shall be maintained.*
4. *The Applicant shall develop no more than four Residential Conservancy Lots within the designated Tree Save Area of the "Big Woods" portion of the Conservancy Subdistrict (as identified on the CDP), and shall limit the extent of permitted clearing to no more than two and one-half acres per each of these four residential lots. A minimum of 55 acres of trees shall be preserved within the "Big Woods" portion of the Conservancy Subdistrict.*

### **Proffer Interpretation & Determination: Conservancy Lots in Big Woods**

The preliminary subdivision application (SBPL 2002-0044, Conditionally Approved) shows one conservancy lot that encompasses 'Big Woods'. Lots defined during the subdivision process are not required to identify if future uses will be residential or non-residential. The Zoning Administrator has determined that if a residence is developed on that lot, it would be a 'residential conservancy lot' and hence disturbance within 'Big Woods' will be limited to no more than 2.5 acres. If that lot is used solely for the reserve wastewater disposal fields, it would not be a 'residential conservancy lot' and Proffer VII.D.4 of the Red Cedar Rezoning that limits disturbance within residential conservancy lots in 'Big Woods' to not more than 2.5 acres per lot

does not apply here. However, the proffer requirement that a minimum of 55 acres of trees be preserved within 'Big Woods' continues to apply.

For the purposes of this Special Exception application, no lot lines are defined on the plats. This is intended to allow for flexibility in defining lot lines during the subdivision record plat application process, at which time substantial conformance with the lot lines shown in an approved preliminary subdivision application is ensured. The County Attorney's Office and Zoning Division have no issues with this proposal.

Conformance with Proffer VII.D.1, ZMAP 2000-0007

The total extent of tree cover on the Red Cedar property is 580 acres. Of this, the Red Cedar Rezoning proffered to maintain at least 80% of 361 acres, which is calculated at 288.8 acres. The sum total of all applications that have since been approved and are currently in process with the County, including this Special Exception, maintain approximately 487 acres of tree save area. The additional tree save area results largely from a proposal for a golf course that was considered during the rezoning application, but subsequently eliminated. This maintains more than 80% of the tree save area and fulfills the proffer requirement of preserving a minimum of 80% of the designated tree save areas. (Proffer VII.D.1, ZMAP 2000-0007).

Conformance with Proffer VII.D.3, ZMAP 2000-0007

The proposed use is in conformance with this proffer as the clearing within the designated tree save area, 'Big Woods' is intended for the installation and use of drainfields, a use allowed by the proffer.

Conformance with Proffer VII.D.4, ZMAP 2000-0007

Proposed condition of approval # 5 seeks to ensure that disturbance within Big Woods for the purposes of installation and subsequent operation and maintenance of the wastewater disposal system preserves a minimum of 55 acres of Big Woods. Within any residential conservancy lots in Big Woods, tree clearing is further limited to 2.5 acres per residential conservancy lot. This fulfills the proffer requirement of preserving a minimum of 55 acres of 'Big Woods.'

## **CONDITIONS OF APPROVAL**

While the proposed design and installation technology for the wastewater disposal areas is in conformance with the Red Cedar Rezoning Proffers, County staff from the Environmental Review Team has expressed concern that the proposed technology is new. Few such systems are in operation today and where such systems exist; they are typically young and have been in operation for about two years. There is insufficient data to determine if there will be any long-term impacts from the operation of the system on 'Big Woods' and the extent of the impact if any. This could create a condition of non-conformance with the Red Cedar Rezoning proffers, if the area of impact reduced the 'Big Woods' area to less than 55 acres. To address this concern, staff has developed the following conditions of approval. The general intent of these conditions of approval is discussed below.

Condition 1 is intended to ensure that the development will be in substantial conformance with the special exception plat shown herein.

Condition 2 is intended to ensure that the primary disposal area is used first, and the reserve disposal area within 'Big Woods' is used only when the primary disposal area requires replacement.

Condition 3 is intended to consider other alternatives to the use of the reserve drainfield area when the primary disposal area fails. This condition becomes essential as it is not possible to estimate at this time, the long-term impacts of the proposed system and to predict when the primary disposal area may fail. It is typically estimated that these disposal areas function for about 30 years, but there are no assurances of this. This condition allows for the consideration of alternate wastewater utility options including central systems, alternate disposal sites and technology more advanced/current at the time the primary reserve area fails, before using the reserve area in Big Woods. The reserve disposal system will be constructed as necessary upon the failure of the primary reserve system or portions thereof.

Condition 4 is intended to minimize disturbance in 'Big Woods' to the minimum necessary, by phasing the use of reserve drainfields. Those drainfields closer to the primary disposal area are to be used first.

Condition 5 is intended to ensure that the technology used in the reserve disposal area in 'Big Woods' will preserve the tree save areas required under the Red Cedar rezoning proffers. The condition also calls for replacing any trees, of a caliper size 3-inches or larger, that are damaged as a result of the wastewater disposal system. The condition calls for such trees to be replaced in a 2:1 ratio since it is generally understood that replaced tree saplings have a survival rate of about 50%.

Condition 6 is essential to ensure conformance with the Red Cedar Rezoning Proffers. Currently the drip irrigation tubes are intended to be placed at a depth of 6" to 12" below the surface of the ground to ensure adequate protection for the tubing from falling tree limbs and fauna and ensure against freezing of any effluent in the pipe. Sometimes, these pipes may be laid at shallower depths and covered with fill material brought from outside the site. The Environmental Review Team has noted that fill materials brought in from outside would adversely impact the undergrowth and tree cover, by limiting oxygen supply to tree roots. If outside fill material is brought onto the site, County staff would recommend that the entire drainfield area be considered a disturbance area. This would increase the disturbance area to a level that brings it into non-conformance with the Red Cedar Rezoning Proffers that require a minimum of 55 acres of 'Big Woods' to be preserved. At this time, this is not an issue as both LCSA and the applicant agree not to bring in fill materials to the site.

## UTILITIES

Central public water connections are available to the site. The Health Department does not have any issues pertaining to the adequacy of the previously approved communal wastewater utility system (ZMAP 2000-0007, Red Cedar) or the proposed primary and reserve wastewater disposal areas and recommends approval of the subject application.

The area identified as the Primary and Reserve Wastewater Disposal Areas will be eased to LCSA, who will own, operate and maintain the proposed utility system. The LCSA concur with the conditions of approval as proposed and recommend approval of the subject application.

## ZONING

Subsequent to the latest referral from the Zoning Division (dated October 22, 2004), the application has been revised and zoning staff concurs that the subject application is in conformance with the proffers associated with the previously approved concept development plan of ZMAP 2000-0007, Red Cedar. All zoning issues have been addressed; the proposed special exception application is in conformance with all applicable regulations of the Revised

1993 Zoning Ordinance. Staff notes that no landscape buffer is required around the proposed use, as the use does not include an above ground structure.

**D. ZONING ORDINANCE CRITERIA FOR APPROVAL**

*Section 6-1310 of the Loudoun County Zoning Ordinance states "In considering a Special Exception application, the following factors shall be given reasonable consideration. The applicant shall address all the following in its statement of justification or Special Exception plat unless not applicable, in addition to any other standards imposed by this Ordinance":*

Standard      *Whether the proposed Special Exception is consistent with the Comprehensive Plan.*

Analysis      The proposed use is in conformance with the Comprehensive Plan as are the previously approved communal wastewater system and rural village for the Red Cedar property (ZMAP 2000-0007, Red Cedar & CMPT 2000-0011).

Standard      *Whether the proposed Special Exception will adequately provide for safety from fire hazards and have effective measures of fire control.*

Analysis      Not applicable.

Standard      *Whether the level and impact of any noise emanating from the site, including that generated by the proposed use, negatively impacts the uses in the immediate area.*

Analysis      The proposed use will not generate any noise.

Standard      *Whether the glare or light that may be generated by the proposed use negatively impacts uses in the immediate area.*

Analysis      No lighting is proposed as part of this application.

Standard      *Whether the proposed use is compatible with other existing or proposed uses in the neighborhood, and adjacent parcels.*

Analysis      The proposed use will not be noticeable from adjacent properties, as it consists of underground wastewater disposal lines, buried at a depth of 6 to 12-inches from the surface. The communal wastewater treatment facility itself is located north of the subject site and is not the subject of this application.

Standard      *Whether sufficient existing or proposed landscaping, screening and buffering on the site and in the neighborhood to adequately screen surrounding uses.*

Analysis      No additional landscaping is recommended as the proposed use will be located underground.

Standard      *Whether the proposed Special Exception will result in the preservation of any topographic or physical, natural, scenic, archaeological or historic feature of significant importance.*

- Analysis Installation of the force mains will require clearing within a 15-foot wide easement, while installation of the drip irrigation tubing is anticipated to create minimal impacts on tree cover and topography. The archaeological study prepared by Thunderbird Archaeological Associates, Inc. (dated June 2001) does not show any features of significance on this portion of the property.
- Standard *Whether the proposed Special Exception will damage existing animal habitat, vegetation, water quality (including groundwater) or air quality.*
- Analysis The proposed use will produce minimal impact on the surrounding animal habitat and air quality. The proposed project does not require a water source and is not anticipated to have any negative effects on surrounding water quality as the effluent will be treated to LCSA standards. There is anticipated to be a small increase in groundwater levels from the discharge of this treated effluent. Impacts to vegetation from the installation and operation of the system will be minimal.
- Standard *Whether the proposed Special Exception at the specified location will contribute to or promote the welfare or convenience of the public.*
- Analysis The proposed disposal areas will serve the communal wastewater treatment plant approved as part of the Red Cedar Rezoning application and will contribute to the welfare of the residents served by this communal wastewater treatment system.
- Standard *Whether the traffic expected to be generated by the proposed use will be adequately and safely served by roads, pedestrian connections and other transportation services.*
- Analysis The proposed use will not generate vehicular trips beyond that required during the installation phases.
- Standard *The effect of the proposed Special Exception on groundwater supply.*
- Analysis No material impacts on the groundwater supply will result from the proposed use as the effluent will be treated to LCSA standards. A slight increase in groundwater levels is anticipated.
- Standard *Whether the proposed use will affect the structural capacity of the soils.*
- Analysis The proposed disposal system will not materially affect the structural capacity of the soils.
- Standard *Whether the proposed Special Exception considers the needs of agriculture, industry, and businesses in future growth.*
- Analysis The proposed facility is planned to accommodate the allowable residences and businesses of Red Cedar.
- Standard *Whether adequate on and off-site infrastructure is available.*



- Analysis The proposed wastewater disposal system, primary and reserve areas will provide adequate utility infrastructure. It is generally anticipated that each of these disposal areas will have a life-span of about 30 years.
- Standard *Any anticipated odors which may be generated by the uses on site, and which may negatively impact adjacent uses.*
- Analysis No noticeable odors that would negatively impact adjacent uses would be generated by the proposed facility. LCSA has indicated that any odors will be at the head works of the treatment plant and these will be treated with an odor control unit. Treated effluent generally has an "earthy odor" and this will be in the water that is discharged below the ground. Odors will not pervade through the soil to any great extent. The dosing of the effluent is intermittent so that the soil remains aerobic. Objectionable odors form in anaerobic environments and LCSA will be specifically preventing such environments.
- Standard *Whether the proposed Special Exception uses sufficient measures to mitigate the impact of construction traffic on existing neighborhoods and school areas.*
- Analysis Construction of the primary disposal area will take place prior to any residential development on the site and hence no impact from construction traffic is anticipated on existing neighborhoods. Construction of reserve disposal areas will have minimal impact from construction traffic.

VI. ATTACHMENTS		PAGE NUMBER
<b>1. Review Agency Comments</b>		
a. Planning Department, Community Planning	(08/30/04)	A-1
b. Building and Development, Zoning Administration	(09/09/04, 10/22/04)	A-6
c. Loudoun County Health Department, Environmental Health	(09/01/04)	A-11
d. Loudoun County Sanitation Authority	(08/13/04)	A-12
<b>2. Proffer Determination from the Zoning Administrator</b>	(05/10/04)	<b>A-13</b>
<b>3. Conditional Approval SBPL 2002-0044 Red Cedar Rural Village</b>	(08/23/04)	<b>A-16</b>
<b>4. Disclosure of Real Parties in Interest</b>		<b>A-17</b>
<b>5. Applicant's Statement of Justification</b>		<b>A-19</b>
<b>6. Applicant's Response to Referral Agency Comments</b>		<b>A-26</b>
<b>7. Special Exception Conditions of Approval</b>		<b>A-53</b>
<b>8. Special Exception Plat</b>		<b>Follows A-53</b>

NOTE: Attachments are not available electronically, but may be viewed at the Planning Department Front Counter or in the Building & Development File Room.

**County of Loudoun**  
**Department of Planning**  
**MEMORANDUM**

**DATE:** December 8, 2004  
**TO:** Loudoun County Board of Supervisors  
**FROM:** Jo Ramesh, AICP  
Senior Planner, Land Use Review  
**SUBJECT:** December 14, 2004 Board of Supervisors Public Hearing  
Staff Report Addendum  
SPEX 2004-0014, Red Cedar Wastewater Disposal Areas

**# 11**  
**Addendum**

**BACKGROUND**

This application is scheduled for the December 14, 2004 Board of Supervisors public hearing. A staff report was provided to you in the packet that was distributed last week, prior to final action by the Planning Commission. This memorandum summarizes the Commission's recommendation and discussion from the December 6, 2004 Planning Commission work session.

**PLANNING COMMISSION REVIEW**

At the December 6, 2004 Committee of the Whole Worksession, the Commission discussed several issues pertaining to the potential impacts of proposed communal wastewater disposal areas and the financial feasibility of extending central wastewater utilities to the site. County staff from the Loudoun County Sanitation Authority (LCSA) and Health Department were present to answer questions. In addition, the Commission sought input from adjacent property owners. Issues discussed are summarized below by topical areas.

**Ground Saturation**

The Commission discussed concerns over ground saturation and waterlogging of soils from the disposal of treated effluent. Neighbors noted that this could create wetland conditions resulting in habitats for rodents and mosquitoes with potential impacts to public health.

LCSA staff noted that ground saturation was unlikely as the effluent would be released in "micro-doses" several times a day, unlike the facility at Lenah Run where larger volumes are discharged once a day. LCSA also noted that within the primary disposal area, the site slopes towards Sycolin Creek to the north and grasses would absorb most of the effluent discharged, with very low volumes actually penetrating into the ground. Similarly, within the reserve disposal area, which has significant vegetation, tree roots would absorb most of the discharge resulting in very low volumes of ground penetration.

On the subject of soil adequacy to absorb discharges, the Health Department indicated that while soils are generally variable, the soil types in the primary and reserve disposal areas are the best soils on the overall Red Cedar development site. There is no diabase at this location

and the soils are predominantly sandstone conglomerates. When testing for soil suitability for use as drainfields, the Health Department looks at the depth at which the most restrictive soils occur. On the subject site, this depth was found to occur at 30-inches and deeper below the surface. The application proposes to dispose the effluent at a depth no greater than 12-inches below the surface and as such the proposed drainfields meet the Health Department standards.

### **Groundwater Quality**

The Commission discussed the potential for groundwater contamination from the proposed use, both from penetration of treated effluent into the ground and seepage of herbicides.

LCSA staff noted that the technology proposed will treat effluent to high standards removing about 95% of contaminants and will not impact groundwater quality. LCSA also noted that they monitor groundwater quality around drainfields in accordance with the requirements of the State Health Department. Such monitoring and testing begins one year prior to the installation of the system and continues after the system is installed. Testing occurs on a quarterly basis (three-month intervals). The Commission recommended that LCSA test the groundwater at adjacent monitoring wells at two-month intervals. This was recommended as a condition of approval.

### **Vegetation and Odors**

The Commission discussed the impacts to vegetation and odors from the proposed communal system. Specifically, citizens noted that contaminants in effluent discharges would change the chemical composition in the soil, which when absorbed by tree roots would adversely impact vegetation.

LCSA noted that high treatment standards would ensure against impacts to vegetation. No noticeable odors that would negatively impact adjacent uses would be generated by the proposed facility. LCSA indicated that any odors will be at the head works of the treatment plant and these will be treated with an odor control unit. Treated effluent generally has an "earthy odor" and this will be in the water that is discharged below the ground. Odors will not pervade through the soil to any great extent. The dosing of the effluent is intermittent so that the soil remains aerobic. Objectionable odors form in anaerobic environments and LCSA will be specifically preventing such environments.

### **Financial Feasibility of Extending Central Wastewater Service**

At the November 15, 2004 Planning Commission public hearing, the Commission raised several questions regarding the financial feasibility of extending central sewer to the site and requested additional information from LCSA. Attachment 1 outlines LCSA responses to Commission questions.

At the December 6, 2004 worksession, neighbors noted that the cost of connecting to central sewer services is about 1.5% of the total cost of the development and that this should be done. It was recommended that central sewer lines be extended in the easement established in the area for the central water line.

In response to Commission questions on this subject, LCSA noted that it would be less expensive to connect to central wastewater services upfront and they would generally prefer to do so, as central wastewater services are more efficient and have lower connection fees when compared to communal systems. However, LCSA noted that it would not be cost efficient to

serve the subject site with central wastewater services at this time. Furthermore, LCSA estimates that it would take about three years to connect the subject site to central wastewater services as it would require obtaining permits from the Army Core of Engineers and input from other organizations such as the Friends of Goose Creek.

LCSA staff further noted that they design systems to be permanent and operate them as such. Whenever there is an opportunity to hook a development into central utility services, where the developments are in a central utility service area, LCSA will seek to do so and the customers/residents who benefit from the hook-up typically pay for such connections.

### **Service Area**

The Commission raised questions regarding the service area of the communal wastewater system plant already approved on the Red Cedar property.

LCSA staff noted that they currently anticipate serving the Red Cedar developments (rural village and hamlets) and the Goose Creek Bend subdivision (approximately 36 dwelling units) with the wastewater treatment plant approved on the Red Cedar site. This treatment plant may also potentially serve the Wildwood subdivision that proposes approximately 20 dwelling units. All these developments are located within the Lower Sycolin subarea of the Transition Policy Area. However, the treatment plant is planned to serve the entire Lower Sycolin subarea under a Commission Permit that was approved by the Board of Supervisors that established these service area boundaries for the treatment plant. At buildout, the treatment plant could support approximately 1,000 dwelling units.

LCSA further noted that treated effluent would be disposed on the property that generates the effluent under the concept of the integrated communal systems. As such the proposed primary and reserve disposal areas that are the subject of this application would only support the treated effluent generated by the Red Cedar development, and not other developments within the Lower Sycolin subarea.

In addition, the Commission discussed the feasibility of extending central wastewater services to this site should the Creekside and Crosstrails Comprehensive Plan Amendment (CPAM) applications result in/facilitate the extension of central utilities to this area. The Commission further noted that the proposed CPAM application in the Middle Goose subarea may result in a larger Area Plan development effort and this and other CPAMs proposed by Greenvest could further facilitate the extension of central utilities to the area, allowing opportunities for connecting the subject site to central wastewater services.

### **Maintenance Requirements**

Neighbors expressed concern that the ½-inch diameter drip irrigation tubing placed at a depth of 8 to 12-inches below the ground surface would be susceptible to frost and damage from maintenance vehicles being driven over them. Neighbors noted that a depth of 24-inches is required with mulch layering on top to protect these pipes from frost. The Commission asked LCSA about their intended courses of action if the drainfields were to fail.

LCSA staff noted that their current engineering standards maintain a certain required excess capacity in the disposal system with drainfields typically designed to handle up to 1.5 times the actual estimated flow volumes. In addition, the design of the integrated communal system could allow for disposal to occur on other off-site drainfields within the subarea, if necessary. Finally, the drainfields are being designed in small zones that would allow LCSA to isolate

problem zones so they can be fixed and brought back online, without interrupting the operation of the overall system.

### **LCSA Prior Experience with Communal Wastewater Systems**

The Commission requested information regarding LCSA prior experience with communal wastewater disposal systems such as the one proposed here.

LCSA staff noted that they have not operated this exact type of system, but have done extensive research on the subject such as the site they visited in Orange, VA a couple of years ago. LCSA staff noted that this system located in an open field, generated no odors and had been in operation for about two to three years when LCSA visited it. Furthermore, this system was discharging effluent from a septic tank, which has a much higher degree of contaminants when compared to the treated effluent being proposed for discharge on the subject site.

### **Community Meeting**

At the November 15, 2004 Planning Commission public hearing, the Commission directed the applicant to meet with adjoining property owners regarding this application. The applicant met with adjoining property owners on November 22, 2004 and provided a memorandum summarizing citizen concerns discussed at the meeting and applicant responses to the same. (Attachment 2)

### **PLANNING COMMISSION RECOMMENDATION**

The Commission voted 6-0-3 (Whitmore, Hsu and Volpe absent) to forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas subject to the findings included in the staff report and revised conditions of approval to the Board of Supervisors with a recommendation of approval.

The Commission placed two additional conditions on the approval. The first condition of approval requires the Loudoun County Sanitation Authority to test the water quality in wells surrounding the drainfields at two month intervals instead of the quarterly inspection currently conducted. The second condition of approval requires the ultimate connection of the proposed communal wastewater service system to central wastewater services when the Sycolin interceptor is in place or within one year of its being put into place.

Staff is currently working with the County Attorney's Office and LCSA to draft these conditions, and they will be made available at the Board public hearing.

### **FINDINGS**

1. The proposed project is in conformance with the policies of the Revised General Plan.
2. The proposed special exception complies with the applicable requirements of the Revised 1993 Zoning Ordinance.
3. Conditions provide for wastewater disposal options to assure the public health, safety and welfare of the community.
4. Conditions provide for the protection of existing vegetation within 'Big Woods' in accordance with the proffers associated with ZMAP 2000-0007, Red Cedar.

### **STAFF RECOMMENDATION**

Staff continues to recommend approval of the subject application subject to the above outlined findings and conditions of approval identified in the staff report. Staff supports the condition recommended by the Commission requiring testing of groundwater in adjoining wells at two month

intervals. Staff is currently reviewing with LCSA the second condition recommended by the Commission to ensure its feasibility. Staff will provide an update on this issue at the Board public hearing. The language of both conditions will be made available at the Board public hearing.

#### **ATTACHMENTS**

1. Memorandum from LCSA dated December 2, 2004
2. Memorandum provided by Mike Banzhaf to the Commission dated December 1, 2004

**County of Loudoun**  
**Department of Planning**  
**MEMORANDUM**

**DATE:** December 14, 2004  
**TO:** Loudoun County Board of Supervisors  
**FROM:** Jo Ramesh, AICP  
Senior Planner, Land Use Review  
**SUBJECT: December 14, 2004 Board of Supervisors Public Hearing**  
**Staff Report Addendum**  
**SPEX 2004-0014, Red Cedar Wastewater Disposal Areas**

**# 11**

**Addendum 2**

**BACKGROUND**

This application is scheduled for the December 14, 2004 Board of Supervisors public hearing. An addendum to the staff report was provided to you in the packet that was distributed last week summarizing the Planning Commission's discussion and recommendation from the December 6, 2004 Planning Commission worksession.

**RECOMMENDATION**

The Planning Commission voted 6-0-3 (Whitmore, Hsu and Volpe absent) to forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas subject to the findings included in the staff report and revised conditions of approval to the Board of Supervisors with a recommendation of approval. The Commission placed two additional conditions on the approval. The purpose of this memorandum is to provide the final language on the two additional conditions (Conditions # 7 and # 8) recommended by the Commission. Staff recommends approval of this application subject to the findings and conditions of approval included in this memorandum.

**SUGGESTED MOTIONS**

1. I move that the Board of Supervisors forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas to the December 21, 2004 business meeting for action.

OR

2. I move that the Board of Supervisors forward SPEX 2004-0014, Red Cedar Wastewater Disposal Areas to the Land Use Committee for further discussion.

OR

3. I move an alternate motion

## FINDINGS

1. The proposed project is in conformance with the policies of the Revised General Plan.
2. The proposed special exception complies with the applicable requirements of the Revised 1993 Zoning Ordinance.
3. Conditions provide for wastewater disposal options to assure the public health, safety and welfare of the community.
4. Conditions provide for the protection of existing vegetation within 'Big Woods' in accordance with the proffers associated with ZMAP 2000-0007, Red Cedar.

## CONDITIONS OF APPROVAL

1. The property shall be developed in substantial conformance with the Special Exception Plats dated June 2004 and revised through 11/12/04, prepared by Bowers & Associates, Ltd. Approval of this application does not relieve the applicant of any Zoning Ordinance, Codified Ordinance or any other requirements.
2. The Primary Wastewater Disposal Area shall be utilized by the Loudoun County Sanitation Authority (LCSA) first before the use of any drainfields shown in the Reserve Wastewater Disposal Area.
3. Should the Primary Wastewater Disposal Area (as depicted on the Special Exception Plats dated June 2004) fail to operate properly and the Reserve Disposal Area be required, the LCSA shall, before using the Reserve Disposal Area within Big Woods, demonstrate to the satisfaction of the County that the following alternative utility options are not feasible in the order of priority listed below
  - a. Connect to a central sewer system, if central sewer services are planned for the subject property and available at the property line or within 300-feet of the property line. Connections to a central sewer system shall not be required where it is shown that such an option is not financially feasible, i.e., places an undue burden on homeowners or the cost of connecting to such a system exceeds the public benefit.
  - b. Utilize an alternate below-grade soil disposal technology, 'more current' than that approved under this Special Exception to be utilized in the Big Woods Area. The alternate technology is defined as one that causes less impact to the ground cover and tree canopy, both during its installation and subsequent operation and maintenance than that currently approved.
  - c. Serve the development by a disposal area outside Big Woods, either within the subject property or outside the subject property in conformance with the utility policies of the County's Comprehensive Plan.
4. Should the use of the Reserve Disposal Area within Big Woods be required, the LCSA shall phase the use of drainfields such that those closer to the Primary Disposal Area are used first, before the drainfields further south on the subject site and farther away from the Primary Disposal Area are used.
5. Within the Reserve Wastewater Disposal Area in 'Big Woods', a wastewater disposal technology, such as drip irrigation, that uses buried flexible tubing for disposal shall be used. In addition, and in accordance with proffer VII.D. of the Red Cedar proffers (ZMAP 2000-0007), the extent of permitted tree clearing within any residential conservancy lot in 'Big Woods' shall not exceed 2.5 acres. A minimum of 55 acres of trees within 'Big Woods' shall be preserved,



as required by proffer VII.D. If the installation and operation of the wastewater disposal system within 'Big Woods' result in the damage or destruction of trees of a caliper size 3 inches or larger, in any area beyond the tree-clearing areas allowed under proffer VII.D., these trees shall be replaced at a 2:1 ratio. Such replanting shall occur first within 'Big Woods' to ensure conformance with the Red Cedar proffers. Additional areas for replanting shall be within the areas between the drainfields within the primary wastewater disposal areas identified on the Special Exception plat.

6. The Loudoun County Sanitation Authority shall not apply any fill materials over the area of drainfields during the installation and/or subsequent operation of the reserve drainfields in 'Big Woods' without the approval of the County.
7. The Loudoun County Sanitation Authority shall monitor and test groundwater quality in the on-site monitoring wells adjoining operating drainfields in the primary and reserve wastewater disposal areas to support the requirements set forth in the operating permit. This monitoring shall occur at two-month intervals.
8. Within one year of the Lower Sycolin Interceptor being available for use, within 300-feet of the property line and LCSA determining it is financially feasible, the property shall connect to the central sewer system. The appropriate financing for such connection shall be determined by the Loudoun County Sanitation Authority.

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## MEMORANDUM

**To:** Loudoun County Planning Commission  
**From:** Loudoun County Public Schools  
**Date:** April 17, 2007  
**Re:** **Western Loudoun High School at Fields Farm (SPEX 2006-0022) Additional Information in Response to the Commission Questions at the April 9, 2007 Work Session**

At the 4/9/07 Commission Work Session the Commission requested additional information from staff and the applicant. The purpose of this memorandum is to provide responses to applicant directed questions.

### **Transportation:**

**What are the traffic counts on Route 711, Alder School Road, between Route 690 and Route 719? Between Route 690 and Route 611? Between Route 611 and Route 287?**

Counts taken from the 2005 VDOT Count book indicate the following volumes –

Alder School Road – From 719 to 690 – 420 ADT  
Alder School Road – From 690 to 611 – 790 ADT  
Alder School Road – From 611 to 287 – 340 ADT

With respect to anticipated traffic volumes on the western portion of Alder School Road from Route 719 to Route 690, neither VDOT nor the County were able to provide projected traffic increases related solely to the paving of the road. However, student location information indicates that approximately 20% of the student body will originate from Round Hill and the area west of the proposed high school. This translates to approximately 600 ADT and 130 AM peak vehicle trips. Given the good condition of Route 719 (Woodgrove Road) and the planned improvement of Route 711 between Route 719 and Alder School Road by the Board of Supervisors, school-related traffic originating in the vicinity of Round Hill will have an alternate route to the proposed high school site via Route 719 to Alder School Road. Students could also take Business 7 to Route 690 north to Alder School Road.

With respect to anticipated traffic between Route 690 and Route 611, the portion of Alder School road fronting the proposed school, the projected ADT is 3,526.

With respect to the anticipated traffic on Alder School Road from Route 287 to Route 611, information was provided in the 4/9/07 memorandum to the Planning Commission on potential student drivers (within the Route 287 School Planning Zones) as follows:

Utilizing the staff recommended HS-3 boundary, and the current geocoded student population locations, it is estimated that there are 220 driving age students that are

located within the Rt. 287 corridor. Applying the 52% student driver figure (extrapolated from Loudoun Valley permit applications), there would be approximately 115 students that would be expected to drive in the Route 287 corridor. How many of those students would utilize Rt. 287 south to the unpaved section of Route 611 is unknown. Alternate routes, such as going west on Route 9 and south on Route 690 or continuing south on Rt. 287 to Hirst are reasonable alternate routes.

**What safety measures could be applied to the unpaved section of Route 711 between Route 611 and Route 287?**

Route 711 between Route 611 and Route 287 is a typical rural gravel road. It is narrow, requiring cars to slow to pass and contains blind curves. It crosses Catoctin Creek over a low set of paved pipes and floods during rainstorms. It is estimated that improving the 1.2 mile section of Alder School Road to VDOT rural collector road standards would cost approximately \$8.72 million.

LCPS Staff contacted VDOT to inquire as to the safety measures that are employed when the road floods. VDOT staff advised that Alder School Road is one of the first roads they check for potential flooding. When VDOT finds that the road has flooded or is made aware that the road has flooded they post "Road Closed" signs at either end of the roadway. When asked what could be done to reduce the dangers on this roadway, it was suggested that a box culvert could be installed to handle a greater volume of water and the road could be built up on either end of the culvert. This would require a flood plain study and alteration as well as construction plans and profiles.

LCPS also asked our Traffic Consultant, Timmons Group, to examine this section of roadway for potential safety improvements:

With respect to increasing safety of the facility, a couple approaches are possible. The first is less expansive and focuses primarily on the Catoctin Creek crossing and floodplain. Recommended improvements with respect to this approach include (1) providing vehicle turnarounds on the eastern and western sides of Catoctin Creek outside the 100-year flood plain to accommodate vehicles making u-turns when the creek's water has crested the road/headwall, (2) the installation of water gauge signs adjacent to the roadway and creek to provide drivers with an indication of the actual depth of the floodwater over the road, and (3) provide additional signage warning drivers not to traverse flood waters. It is not recommended that guardrails be installed. While guardrails may "catch" a floating car, it is our opinion that guard rails would provide a visual guide to the location of the road during flooding and make drivers more apt to cross during flood conditions. It should also be noted that the guardrails could collect additional debris during heavy flooding and increase the potential of headwall and road bed damage.

A second approach would be a pave in place project. This approach would provide a better road; however, the road width, sight distances, and curve radii would not satisfy

the VDOT's geometric design standards for rural local roads (GS-4) shown in the VDOT Road Design Manual. VDOT approval would be needed on this approach. In addition to the paving, it is recommended that the signage indicated above for the Catoctin Creek Crossing be installed and additional signage be installed in certain locations to alert drivers to sharp/blind turns and steep grades. Timmons Group cautions, however, that paving the road without addressing sight distances or other safety issues could actually result in a less safe situation than the gravel road. When LCPS staff talked with VDOT representatives, concern was also expressed by VDOT that if this road were to be paved it has the potential to increase speeds and potentially reduce safety. Paving would allow cars to travel faster and without addressing the existing road alignment this could be less safe than the gravel road.

A final approach would be to bring the road up the rural local road standards (GS-4) shown in the design manual. Assuming road improvements are classified as a "restoration" project and the 2005 VDOT ADT of 340 trips per day is acceptable, the road design would incorporate 18' of pavement along with the accepted ditch sections, etc. Other items such as radii and sight distance would need to be addressed, but given the context of the project and the existing conditions, these are items that would need to be discussed with and approved by VDOT on a case-specific basis. Such an improvement could require substantial right of way acquisition and potential impact to at least one existing home located in close proximity to the roadway.

LCPS will implement measures to discourage students from using this section of Alder School Road. A draft Parking Permit Acknowledgement is attached as one method of notifying students and parents of the concern regarding this segment of Alder School Road.

#### **School Size:**

#### **Why doesn't Loudoun County Public Schools build smaller schools in rural areas of the county?**

The H.S.-3 project was approved and funded in FY 06. Both the School Board and the Board of Supervisors (BOS) approved the project which called for the funding and construction of a 1,600 student high school. Once a bond referendum is approved by the voters, Loudoun County Public Schools is obligated to construct the facility approved by the electorate.

The Loudoun County School Board establishes policy that sets the guidelines for all school construction. The guidelines currently call for 875 student elementary schools, 1,350 student middle schools and 1,800 student high schools. From a historical perspective, the Loudoun County School Board has tried to construct smaller school facilities, however, the pressures from growth and funding have resulted in a gradual expansion of the school facilities constructed in Loudoun. Ten years ago, the School Board constructed and opened Potomac Fall H.S., a 1,350 student high school. The BOS

tried to require the School Board to build larger schools. The School Board sued the BOS and the court ruled that the School Board had the right to determine the appropriate size of schools that were to be built. Financial and political pressures since then have resulted in adjustments to school size at all levels. Elementary schools increased in size from 750 to 875 students. In a similar vein, middle schools increased in size from 1,000 to 1,184 and now to 1,350. High school size has increased from 1,350 to 1,600 and now 1800 students.

The supervisors have consistently sought the construction of even larger schools given the number of facilities that need to be constructed in Loudoun. Given the current adopted zoning in the county, the public school system will likely grow from 50,478 students to an estimated 110,000 to 120,000 students. The recently adopted zoning in western Loudoun suggests that LCPS will need to provide space for 15,236 more students in western Loudoun at build-out. That translates into nine more 875 student elementary schools, 2.5 middle schools (1,350 students) and 2.5 high schools (1,800 students). Even if one-half of the projected build-out occurs in western Loudoun, it translates into a significant need from both a land and facilities perspective.

If LCPS was to build smaller schools, that would compound the difficulty of site acquisition since there are no proffered school sites in western Loudoun. Rather than needing to purchase 14 or 15 school sites, the number would likely double if School Board policy regarding school size were to change. Given the obstacles that LCPS currently faces in the west, smaller schools do not appear to be a reasonable alternative. Furthermore, any initiative to construct smaller schools in the west would have to be determined by the Loudoun County School Board and it would likely be applied universally since it would be hard to argue that western Loudoun deserves a different education standard than the rest of the county. Last, it would seem that any attempt by the School Board to construct smaller schools would encounter stiff opposition from the BOS who continues to lobby for even larger schools.

# Parking Permit Acknowledgement

The undersigned student and parent acknowledge and understand that Loudoun County Public Schools discourages student drivers from school using the section of Alder School Rd. (Rt. 711) between Berlin Turnpike (Rt. 287) and Purcellville Rd. (Rt. 611) to go to and from school.

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Student Name

Date

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Parent/Guardian

Date

A-49

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A-50